

Rule 21 Working Group Meeting #38 - Agenda

October 24, 2002

California Energy Commission

1516 9th Street

Sacramento, CA

Hearing Room B

Meeting Agenda

9:30 am – 4:00 pm

Combined Group Discussion 9:30 am to 12:30 am

- Introductions, General Housekeeping, & Next Meeting Location – Sacramento, Energy Commission Building 1516 9th Street, Dec. 10, 9:30am – 4:00pm.
- Net Energy Metering Forum: Nov.18 in Sacramento 9:30am-4:00pm
- Technical Group Updates
 - IEEE P1547 Update and Next Steps –
Ballotted in Sep. Result: 90% affirmative. 220 people voted: 20 negative. Negatives were discussed by Chuck W. and the writing committee. All negatives were issues previously discussed. Each of the 20 negatives were assigned a champion from the writing committee, who will discuss the issue with the negative voter. Ballot will be recirculated, with a meeting in late November; at the March meeting the standard will be sent to the IEEE Standards Board. Likely to be up on IEEE website in 8 months. All related standards efforts are rolled into 1547 as 1547.1, .2, .3 etc. (Includes Communications for Monitoring & Control, Application Guide, + 2-3 additional proposals including Islanding. Odds, group agreed, of sustained island are extremely low. Rule 21 should "adopt everything in P1547 or have a good reason not to", according to Chuck. Scott L. said that SCE may need to require some items that are not included in 1547; some SCE utility standards may be more strict than 1547. Mfr. position is that they need to certify to 1 standard, not modified by individual states—1547 should be that standard.
 - Supplemental Review Document Update
Non Export, SCCR, 15% line section, + other screens are in "CA Elec. Rule 21 Supplemental Review Guideline" document that the tech group (lead by Chuck W.). SCCR led by SCE's Ed Grebel, has become one of the more difficult issues. Tony M. of ORA is heading up definitions for the supplemental review doc. Werner B. urges tech group to make language consistent with Rule 21 Section H (Glossary). At this point, the Supp Review is not included in the Rule 21, and the group does not contemplate inclusion now. At this point, the group intends the document as guidance. Tony M. proposes that utilities write ½ page for each project that goes to supplemental review to get an idea what problems are actually occurring. PG&E has larger staff of field implementation, some discussion that field personnel do not always understand or implement Rule 21 correctly. PG&E has a new training program and has implemented single point of contact project managers to handle interconnection; hopefully this will result in smoother implementation of Rule 21.

Non-export screen: there is a remaining issue that a net metered systems are exporting. Chuck W. said of tech discussions: There should be a term for "acceptable export"; R21 says that net metered systems will not be charged for supplemental review.

Plan is to complete this document by end of December.

- **Islanding Documentation**

Tony M. says that islanding is plausible, but believes that it's unlikely and that anti-islanding provisions are burdensome. Is risk identifiable with specific customers? How should cost be allocated? Suggests: that putting costs on particular customers is unjustified. Jerry J. stresses continued safe and reliable operation of the grid; costs buckets for 2827 (utility requirement) should help show what costs are. Tony doesn't know what costs are and is looking for more information; he'd like islanding risk to be fact-based.

No studies have been performed on small system islanding risk or impact. Which circumstances would be a concern to a protection engineer? Bill C. says that the group has made progress that is undermined by returning to the question of whether anti-islanding exists. Existing systems are protected against islanding, (an unidentified stakeholder says), and so the issue isn't worth arguing.

Tony M.'s prepared statement: "The burdens put on customer generators related to preventing the phenomenon of unintended islanding should be kept in proportion to the other burdens placed on customers for other threatening phenomena of *like* probability."

- **Who Enjoys the Optional Provisions of the Guidance Document?**

- **Status of Tecogen Rule 21 Equipment Certification**

Information lacking still from Tecogen; also, few comments have been received from the certification group.

- **Regulatory Issues:**

- **Update on FERC ANOPR and Strategy Discussion**

Jerry J's report: Large gen ANOPR: 6 negotiating groups to reach consensus (for gens >20MW). FERC adopted the generators doc mostly. Now the group is divided into 2: 0-2MW "super expedited agreement" and 2-20MW "expedited agreement". Insufficient time to develop an effective rule. Many groups are involved; there is no agreement on process; there is no use of diagrams or flow charts, but focus on use of text—jumping straight into crafting rule language. There is a danger, from Jerry's perspective, that the small gen draft document may be adopted without consensus. FERC is trying to promote DG. Informal poll of other utility people on DG: utility engineers are unfamiliar with DG interconnection; no internal processes; little experience with DG/big central plant perspective; too little time/too much other work for all utility personnel that are called in to assess DG interconnections. Concern that FERC will not overcome the trust issue (between utilities & dg mfr/developer) to reach consensus; likely then

that FERC will have to make a call. Yet now, there is almost no FERC presence in input to the meeting (FERC staffers attend, but interact little).

Question what the Rule 21 influence will be on FERC? Some technical overlap. Rule 21 is put forward by CA utilities and CPUC, with full consensus; with little time (only 4-6 weeks), it's best to use a rule that's vetted in a broad stakeholder process: Rule 21. CA utilities are in the role of moderates; many east coast utilities are more conservative and less receptive to DG.

There is no consensus document or neutral scribe for the process. Therefore, not all stakeholders' comments are included, making consensus even more difficult.

Next FERC meeting Nov 6-7; consensus doc filed Nov 12; comments filed by Nov27.

- Exit Fees & Departing Load Charges: CPUC and Stakeholder Actions
fyi: Testimony and hearing over the last few weeks. Many unresolved issues. Expected final decision by end 2002. Settlement agreement signed by SCE, PG&E, TURN and DG coalition. There is a 260MW cap per year, with unused portion pushed forward to following year.

There is no metering required in the settlement agreement.

- Net Metering Issues and Possible Forum
Discussed above.
- Possible Update on CPUC Business Meeting Activities???
- FOCUS DG Monitoring Study Update
 - Internet Demonstration
Joe Simpson gave a demonstration. Two sites are recording data; a third is awaiting a DSL connection and is otherwise available. Two more sites will go in in November. The site address is <http://68.5.129.61:81> . Joe S. will provided sample rate, as follows:

This is a follow-up to your question about the ION 7600 Sampling Rates, which you raised at the last Rule 21 Meeting in Sacramento. It is a summary of what we discuss at lunch.

Waveform Recording

This meter can simultaneously capture all voltage and current channels.

- Sub-cycle disturbance capture

- Record back-to-back waveforms for up to several seconds

- Display and compare multiple waveforms in ION Enterprise software

- Record 7 cycles at 256 samples/cycle to 96 cycles at 16 samples/cycle

Energy

The ION 7600 is fully bi-directional and meter energy in four quadrants. It provides active, reactive and apparent energy parameters and can integrate any instantaneous power parameter

to supply measurements like Volt-Hours, Amp-Hours, etc. Energy registers can be logged automatically on a programmed schedule.

- kWh delivered & received
- kWh, kVARh, kVAh net (delivered - received)
- kWh, kVARh, kVAh total (delivered + received)
- kVARh, kVAh delivered & received
- Volt-hours & Amp-hours
- Integration of any instantaneous measurement

Demand

The ION 7600 supports all standard demand calculation methods, including block, sliding window (rolling block), thermal (exponential), and predicted demand. It can measure demand on any instantaneous value and record peak (maximum) and minimum demand with date and time stamps to the second. Peak demand registers can be reset manually (password protected) or logged and reset automatically on a programmed schedule.

- kW, kVAR, kVA demand, min/max
- Amps, Volts demand, min/max
- Demand on any instantaneous measurement

Instantaneous

This meter provides a choice of high accuracy, 1 second or high-speed, 1/2 cycle measurements, including true RMS, per phase and total for:

- Voltage & current
- Active power (kW) & Reactive Power (kVAR)
- Apparent power (kVA)
- Power factor & frequency
- Voltage and current unbalance
- Phase reversal

If you have any other questions about the ION 7600, please give me a call or consult Power Measurements Website and specific data of the ION 7600 meter (<http://www.pwrm.com/Products/devices/ION7600/default.asp>).

Non-Technical Breakout

- Continuing Debate on Rule 21, Section F (Telemetry and Telemetering Equipment) and Strategy for Filing Section F Advice Letters

No consensus could be reached on changes to the tariff language, and the group ran out of time to discuss no language. Therefore, all discussions of Section F were tabled, so the advice letters could be filed before the existing sunset date (12-31-2002) expires. The advice letters will only contain a change of the sunset provision date (to December 31, 2004) from existing tariff language (i.e., the recent advice letter filings approved by CPUC for SDG&E and SCE).

- Timing for Future Rule 21 Updates
- Further Discussion on FERC ANOPR Strategies (if necessary)

Technical Breakout

- Status of Tecogen Rule 21 Equipment Certification Request
- Technical Discussion of Accommodating P1547 in Rule 21
- Comments on Draft Supplemental Review Guidance Document